

STRIDULATION IN THE GENUS *IPS* DE GEER(Coleoptera: Scolytidae)<sup>1</sup>

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The stridulating organ described for the female of *Ips sexdentatus* Boern. by Nunberg (1950) has been found on the female of *Ips confusus* (LeConte), *I. ponderosae* Swaine and *I. oregonis* (Eichhoff). This organ and the sound produced provide a simple, reliable technique for sex determination. As far as is known, this is the first New World record for the presence of a stridulating organ in the genus *Ips*. Hopkins (1915) reported that "the stridulating accessories (of Scolytid beetles) appear to be confined largely to the seventh abdominal tergite and the inner subapical area of the elytra and to the anterior margin of the pronotum and the posterior dorsal area of the head." In correspondence with Keler (see Nunberg, 1950), Hopkins wrote that he found the organs at the back of the head in species of *Ips* but that he thought they were confined to the male. According to my observations, the males of the above three species do not possess a stridulating accessory on the posterior region of the head as Hopkins states. Sex has been verified in all cases by dissection. Preliminary observations confined to a small series of *I. radiatae* Hopkins and *I. emarginatus* (LeConte) did not reveal the presence of a stridulating accessory on the head of either the male or female.

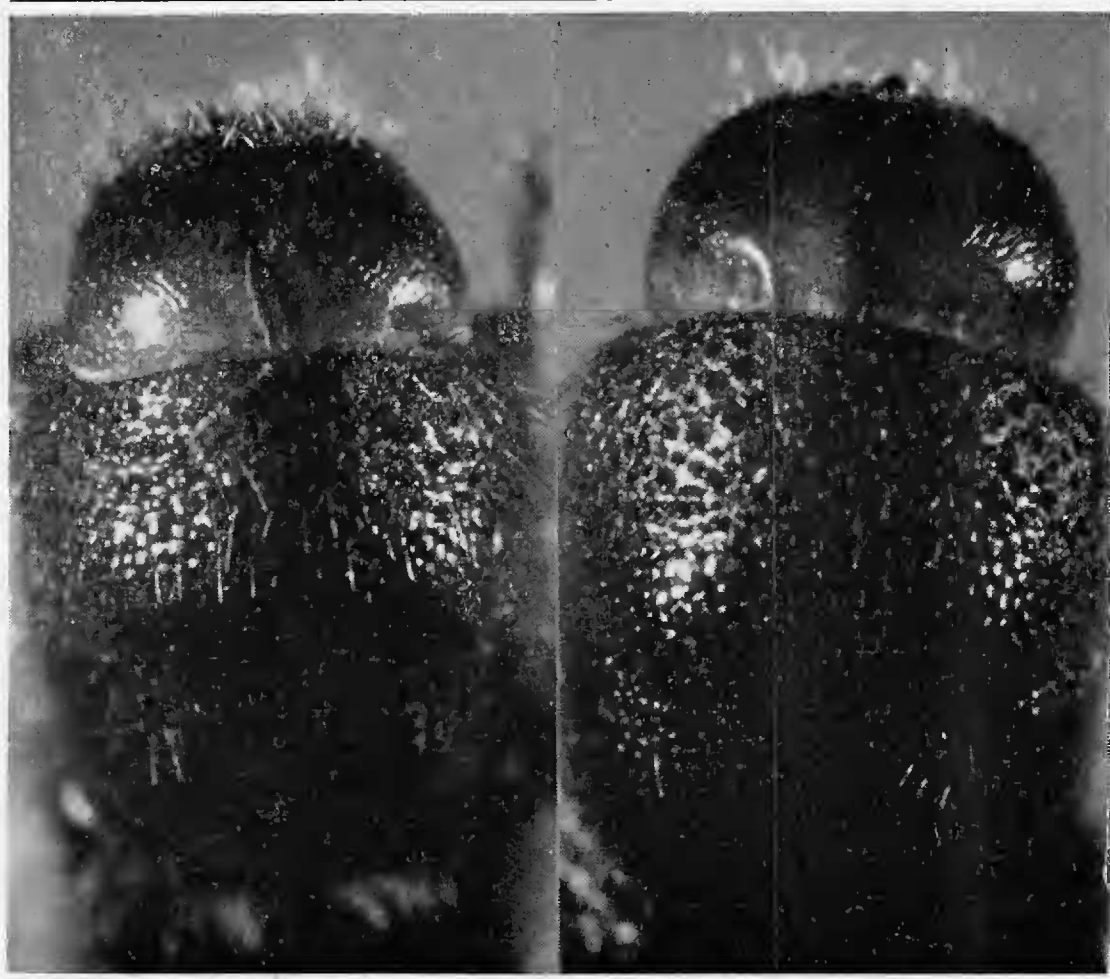
Stridulation is readily heard if the female is held close to the ear between the thumb and forefinger so that the head is permitted to move freely. However, it was found that *Ips* did not stridulate as readily as *Dendroctonus* when held in this manner. To encourage stridulation the insect may be rotated between the fingers. If stridulation is heard, the sex is undoubtedly female while the sex of the non-stridulating individuals may be verified by squeezing the beetle gently while holding it by the sides. The head will protrude and drop down from beneath the pronotum and the presence or absence of the *pars stridens*<sup>3</sup> (Dudich, 1920)

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<sup>3</sup> *pars stridulans* (Imms, A.D. 1957. A General Textbook of Entomology. Methuen & Co. London, p. 116).

on the posterior dorsal area of the head (figure 1) is readily determined. This file-like area is easily visible in these three relatively large species at a magnification of 10X. The complementary organ, the plectrum, is located on the inner surface (anterior one-third) of the pronotum.



#### EXPLANATION OF FIGURES

Left figure: a view of the exposed posterior dorsal region of the female head showing the location of the pars stridens on *Ips ponderosae* Swaine ( $\times 25$ ). Right figure: a similar view of the male ( $\times 25$ ).

#### LITERATURE CITED

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